## **WE CLAIM AS OUR INVENTION:**

- 1. An arrangement for passive gas sampling of a breathing gas in a breathing system, comprising:
  - a tube-piece having a first connector adapted to receive an inspiratory gas flow, a second connector adapted to deliver an expiratory gas flow, and a third connector adapted to deliver the inspiratory gas flow and to receive the expiratory gas flow;

a measurement chamber associated with said tube-piece; and

- said tube-piece further having a first port disposed between said second connector and said third connector and connected to said measurement chamber, a second port disposed between said first connector and said third connector and connected to said measurement chamber and a third port disposed between said first connector and said second connector and connected to said measurement chamber.
- 2. An arrangement as claimed in claim 1 wherein said tube-piece has flow paths therein to establish gas flow primarily between said first port and said measurement chamber and said second port when said inspiratory gas flow passes through said tube-piece, and to establish a gas flow primarily between said third port, said measurement chamber and said first port when said expiratory gas flow passes through said tube-piece.
- 3. An arrangement as claimed in claim 1 wherein said tube-piece comprises a fourth port disposed between said second connector and said third connector and connected to said measurement chamber.

4. An arrangement as claimed in claim 3 wherein said tube-piece has flow paths therein to establish a gas flow primarily between said first port, said measurement chamber and said second port when said inspiratory gas flow passes through said tube-piece, and to establish a gas flow primarily between said third port, said measurement chamber and said fourth port when said expiratory gas flow passes through said tube-piece.